

**Air Pollution Control District
Jefferson County, Ky
18 October 2000**

TITLE V PERMIT SUMMARY

Company: Kosmos Cement Company - Louisville Plant

Plant Location: 15301 Dixie Highway, Louisville, KY 40272

Date App. Received: 21 April 1997

Date Admin. Complete: 11 June 1997

Date of Draft Permit: 22 October 2000

Date of Proposed Permit: 14 December 2000

District Engineer: Jeani Shashkova

Permit #: 156-97-TV

Plant ID: 0060

SIC Code: 3241

NAICS: 32731

AFS: 00060

Introduction:

This permit is to be issued according to: (1) District Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide practical methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM), particulate matter less than 10 microns (PM₁₀), and lead (Pb); unclassifiable for particulate matter less than 2.5 microns (PM_{2.5}); and is a moderate non-attainment area for ozone (O₃).

Application Type/Permit Activity:

- ☒ Initial Issuance
- ☐ Permit Revision
 - ☐ Administrative
 - ☐ Minor
 - ☐ Significant
- ☐ Permit Renewal

Compliance Summary:

- ☒ Compliance certification signed
- ☐ Compliance schedule included
- ☐ Source is out of compliance

I. Source Description

1. **Class I Area Impacts:** This source is located in or near a Class I area.
2. **Product Description:** Cement Manufacturing
3. **Overall Process Description:** Crushing, grinding, screening/conveying raw limestone, clays and other ingredients of appropriate size for induction into the kiln. Raw materials are dried in gas/oil fired driers and then introduced into the oil/coal fired kiln. The clinker from the kiln is ground to proper size, stored in silos for later shipment via rail car, truck transport or river barge.
4. **Site Determination:** There are no other facilities which are contiguous or adjacent and under common control.
5. **Emission Unit Summary:**
 - a. **U-1:** Barge Unloading and Transfer
 - b. **U-2:** Limestone Handling
 - c. **U-3:** Raw Material Crushing
 - d. **U-4:** Limestone Storage / Reclaim
 - e. **U-5:** Raw Material Crushing & Drying (clay)
 - f. **U-6:** Proportioning Silos
 - g. **U-7:** Raw Mill "D"
 - h. **U-8:** Raw Mill "A"
 - i. **U-9:** Raw Mill "B"
 - j. **U-10:** Raw Mill "C"
 - k. **U-11:** Blending Silos
 - l. **U-12:** Kiln Feed System
 - m. **U-13:** Preheater & Kiln
 - n. **U-14:** Bypass System
 - o. **U-15:** Insufflation System
 - p. **U-16:** Coal Handling System
 - q. **U-17:** Coal Mill System
 - r. **U-18:** Clinker Cooler
 - s. **U-19:** Clinker Handling/Storage/Reclaim
 - t. **U-20:** Finish Mill #1
 - u. **U-21:** Finish Mill #2
 - v. **U-22:** Finish Mill #3 for Kosmortar
 - w. **U-23:** Lime Slurry System
 - x. **U-24:** Rail/Barge Loading
 - y. **U-25:** Truck Loading
 - z. **U-26:** Storage Silos and Packaging
 - aa. **U-29:** Gasoline Dispensing Facility

ab. **U-30:** on-halogenated Cold Solvent Metal Cleaner

6. Fugitive Sources:

There are several fugitive emission points throughout the process, raw material storage piles, coal piles, conveyor transfer points and so on.

7. Title V Major Source Status by Pollutant:

Pollutant	Actual Emissions (tpy) 1999 Data	Major Source Status (based on PTE)
CO	2066.44	YES
NO _x	2724.3	YES
SO ₂	216.4	YES
PM	1893.3	YES
PM ₁₀	738.1	YES
VOC	197.5	YES
Single HAP >1 tpy		
Hydrogen Chloride	8.6	YES
Total HAPs	8.6	NO

8. This source is subject to the Cement Manufacturing MACT and compliance was required at startup, after the modifications were completed.

9. Applicable Requirements:

☐ PSD ☒ NSPS ☒ SIP ☐ Other
☐ NSR ☐ NESHAPS ☒ District-Origin ☒ MACT

10. Referenced Federal Regulations in Permit: 40 CFR 60, Sub Part OOO, 40 CFR 60 Subpart F, 40 CFR 63 Subpart A, and 40 CFR 63 Subpart LLL.

II. Regulatory Analysis

1. Emission and Operating Cap: The source is subject to plant-wide emissions caps in order to avoid PSD.

2. **Compliance Status:** The source signed and submitted a Title V compliance certification in its permit application.
3. **Operational Flexibility:** The source did not request to operate under alternative operating scenarios in its Title V Permit Application.
4. **Testing Requirements:** Relative Accuracy tests are required once per year on the Continuous Emissions Monitoring Systems for NO_x, SO₂ and CO from the kiln. The company shall be required to perform PM tests, methods 1-5, on some collectors subject to 40 CFR 60 subpart OOO. 40 CFR 63 Subpart LLL requires Method 5 tests every 5 years for the kiln and cooler, Method 9 tests every 5 years for the raw and finish mills and tests every 30 months for dioxins and furans.
5. **Monitoring, Record keeping and Reporting Requirements:** The source is required to monitor, maintain records of, and report on various operating parameters to demonstrate ongoing compliance with all applicable requirements. Compliance reporting is required semi-annually, except where underlying applicable regulations or permit conditions require more frequent reporting.

The source shall monitor the following:

Opacity

Emission Units U-1, U-2, U-3 and U-23: The daily, weekly or monthly visible emission survey is adequate for periodic monitoring to demonstrate compliance with the opacity standards of 40 CFR 60, Subpart OOO.

Emission Units U-4 through U-12, U-14 through U-16, U-18 through U-22 and U-24 through U-28: The monthly and semi-annual visible emission test (test Method 22) is adequate for periodic monitoring to demonstrate compliance with the opacity standards of 40 CFR 60, Subpart F and 40 CFR 63, Subpart LLL.

The source is required to perform a Method 9 or Method 22 at points where visible emissions are observed. The company has had no history of compliance problems with the opacity standard. The periodic surveys coupled with Method 9 and Method 22 tests or just Method 22, if necessary, are adequate to demonstrate compliance with the opacity standards.

Emission Units U-13, U-14 and U-18: Opacity is monitored by continuous opacity monitors. These are subject to all federal testing and compliance assurance requirements.

Particulate

Emission Units U-1 through U-26: The source shall inspect all control equipment on a set schedule: maintain records of the inspections and repairs on the units. The District has determined that the record keeping, control equipment inspection and maintenance are adequate periodic monitoring to demonstrate compliance with the PM standards. It needs to be noted, that the insulflation system, U-15, no longer exists, due to the modifications at the plant and the owner or operator will be submitting a new application to account for the modifications, in January 2001.

The District determined that emission unit **U-27 and U-28** were to be treated as an insignificant activities. There are no applicable regulations for these emission units.

Sulfur dioxide

The source has continous emissions monitoring system (CEMS) for SO₂ monitoring on the kiln and kiln bypass (**U-13 and U-14**). The source is required to maintain records on sulfur content of fuel oil combusted in the dryers. The source is required to have tests conducted on off-spec oils, for sulfur content, that will be combusted in the dryers.

NO_x

The source has continous emissions monitoring system (CEMS) for NO_x monitoring on the kiln and kiln bypass (**U-13 and U-14**). The source is subject to Regulation 6.42 and has a NO_x RACT Plan in place, which is attached to the permit. It needs to be noted that the by-pass no longer exists after the plant modifications and the owner or operator will be submitting a new application to account for the modifications, in January 2001.

CO

The source has continous emissions monitoring system (CEMS) for CO monitoring on the kiln and kiln bypass (**U-13 and U-14**). The requirement for CO monitoring became applicable at start up, after the modifications were completed.

6. Off-Permit Documents: None

The District considers an “off-permit document” as a document on which a source’s compliance with given regulation(s) is contingent or which contains regulatory requirement(s), but is only referenced in a source’s Title V Operating Permit. The designation “off-permit document” shall be made at the District’s discretion, and may include, but not be limited to, documents such as Regulation

1.05 VOC compliance plans, Preventative Maintenance Program (PMP), Management Of Change System (MOCS); or other documents which are too voluminous to place in the permit.

III. Other Requirements

1. **Temporary Facilities:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Compliance Schedule/Progress Reports:** The source certified compliance with all applicable requirements; therefore, no compliance schedule or progress reports are necessary.
4. **Emissions Trading:** None
5. **Acid Rain Requirements:** The source is not subject to the Acid Rain Program.
6. **Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any source that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not use any of the listed chemicals.
7. **Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR 68 Subpart F and Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount.
8. **Insignificant Activities:** The following activities, as referenced in the company's Title V permit application, have been determined by the District to be insignificant.

Insignificant Activities		
Description	Quantity	Basis
Internal combustion engines fixed or mobile	1	Reg 2.02, sec 2.2
Brazing, soldering or welding operation	1	Reg 2.02, sec 2.3.4
500 Kw Emergency Generator	1	< 100 hr annual operation
Unpaved Haul Roads	various	No regulatory authority

Outdoor Storage Piles, coal, gypsum, ash, etc.	various	No regulatory authority
Combustion Source <10 MMBtu, #2 fuel oil	1	Reg 2.02, sec 2.1.1
Diesel/fuel oil storage tanks, 3-10,000 gallon, 1-500 gallon capacity	1	Reg 2.02, sec 2.3.23
Used (waste) oil storage tank - 500 gallon capacity	1	Reg 2.02, sec 2.3.23

- A. Insignificant Activities are only those activities or processes falling into the general categories defined in Regulation 2.02, Section 2, and not associated with a specific operation or process for which there is a specific regulation. Equipment associated with a specific operation or process (Emission Unit) shall be listed with the specific process even though there may be no applicable requirements. Information contained in the permit and permit summary shall clearly indicate that those items identified with negligible emissions have no applicable requirements.
- B. Activities identified In Regulation 2.02, Section 2, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source and must be included in the Title V permit.
- i. No facility, having been designated as an insignificant activity, shall be exempt from any generally applicable requirements which shall include a 20% opacity limit for facilities not otherwise regulated.
 - ii. No periodic monitoring shall be required for facilities designated as insignificant activities.